

Notice of Allowability

Application No.

09/914,146

Examiner

Ashwin Mehta

Applicant(s)

VAINSTEIN ET AL.

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to papers filed September 7, 2005 and the telephone interview on October 3, 2005.
2. ☒ The allowed claim(s) is/are 21,22,24,26,29,31 and 33-40.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date attached.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Objections and Rejections

1. The objection to the priority statement for containing new matter is withdrawn in light of its amendment.
2. The objection to the color drawings is withdrawn in light of the fulfillment of the requirements of 37 CFR 1.84.
3. The rejection of claims 22-25 and 29-40 under 35 U.S.C. 112, 2nd paragraph, is withdrawn in light of the claim amendments.
4. The rejection of claims 21-26 and 29-40 under 35 U.S.C. 112, 1st paragraph, is withdrawn in light of the claim amendments.

Examiner's Amendment

5. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Dr. Jianming Hao on October 3, 2005.

The application has been amended as follows:

In the claims,

Art Unit: 1638

Non-elected claims 1-20, 27, and 28 have been cancelled.

Claims 25 and 32 were cancelled.

In claim 24, line 1, the recitation, "22" was replaced with --21--.

6. Claims 21, 22, 24, 26, 29, 31, and 33-40 are allowed.

7. The following is an examiner's statement of reasons for allowance: Applicants developed a method to enhance fragrance production in plants by inhibiting expression of the flavanone 3-hydroxylase gene (*fht*), comprising transgenically expressing an antisense oligonucleotide targeting the gene. The *fht* gene is part of the anthocyanin biosynthetic pathway. Allen et al. (U.S. Patent No. 6,570,064, issued May 27, 2003, claiming priority to February 25, 1998) suggests that nucleic acids encoding flavanone 3-hydroxylases may be used to create transgenic plants expressing *fht* at higher or lower levels than normal, to influence color, disease resistance, and oil (col. 9, lines 15-24 and col. 10, lines 3-16). However Allen et al., and the prior art as a whole, do not teach or fairly suggest that fragrance can be affected by manipulating *fht*, or a method comprising expressing an antisense oligonucleotide that targets the *fht* gene in a transgenic plant and selecting plants with enhanced fragrance, or transgenic carnation plants in particular. A post-filing publication, Zuker et al. (Mol. Breed., 2002, Vol. 9, pages 33-41), teaches that while several genes from the anthocyanin biosynthetic pathway have been used to manipulate flower color in numerous plants, *fht* genes have not, and that antisense suppression of the *fht* gene in transgenic plants also unexpectedly enhanced fragrance.

Art Unit: 1638

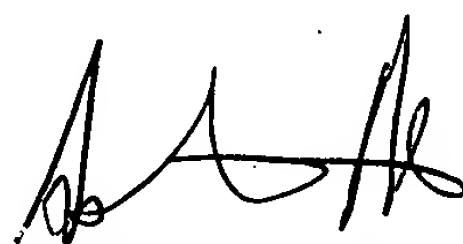
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

Any inquiry concerning this or earlier communications from the Examiner should be directed to Ashwin Mehta, whose telephone number is 571-272-0803. The Examiner can normally be reached from 8:00 A.M to 5:30 P.M. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Gary Jones, can be reached at 571-272-0745. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

October 12, 2005



Ashwin D. Mehta, Ph.D.
Primary Examiner
Art Unit 1638